



**Transcript Exhibit(s)**

**Docket #(s):** RR-03639A-07-0519

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**Exhibit # :** SI

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Arizona Corporation Commission  
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ARIZONA CORPORATION COMMISSION  
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**Staff Memorandum**

To: THE COMMISSION

DOCKET NO. RR-03639A-07-0519

From: Safety Division

**JUN 13 2008**

Date: June 13, 2008

LEGAL DIV.  
ARIZ. CORPORATION COMMISSION

RE: IN THE MATTER OF THE APPLICATION OF THE UNION PACIFIC RAILROAD COMPANY TO ALTER FIVE CROSSINGS OF THE UNION PACIFIC RAILROAD IN PINAL COUNTY, ARIZONA AT TREKELL, KEELING, PEART, COX AND SUNLAND GIN ROADS.

**Background**

On September 7, 2007, the Union Pacific Railroad Company ("Railroad") filed with the Arizona Corporation Commission ("Commission") an application for approval for the Railroad to alter five crossings in Pinal County ("County"), Arizona by adding a second set of mainline tracks. Three of these crossings are in the City of Casa Grande ("City") as follows: Trekell Road, AAR/DOT NO. 741-367-R; Cox Road, AAR/DOT No. 741-372-M; and Sunland Gin Road, AAR/DOT No. 741-374-B. The fourth and fifth crossings are in Pinal County at Keeling Road, AAR/DOT No. 741-368-X and Peart Road, AAR/DOT No. 741-371-F. Commission Safety Division Staff ("Staff") issued data requests and those data requests and the Railroad's responses (without attachments), are included as attachments to this memorandum.

Union Pacific's filing in this application requests approval for the Railroad to add a second main track, twenty feet from the center of the existing main track at three crossings in the jurisdiction of the City of Casa Grande (Trekell, Cox, and Sunland Gin), and at two crossings under Pinal County's jurisdiction (Keeling and Peart). The application also seeks authority to construct a new siding track through the Trekell and Keeling Road crossings so that both crossings will have three sets of tracks consisting of two mainline tracks and one siding track. This application is part of the Railroad's double tracking effort for their Sunset Route across Arizona.

On February 21st, and 22nd, 2007, Staff, the Railroad, the City of Casa Grande, and Pinal County, participated in diagnostic reviews of the proposed improvements at Trekell, Keeling, Peart, Cox, and Sunland Gin Roads. All parties present were in agreement to the proposed improvements at the crossings.

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The following is a break down of each of the five crossings in this application, including information about each crossing that was provided to Staff by the Railroad and its contractors.

### **Geographical Information**

All five crossings in this application are located within Pinal County. The rail line runs in a south-east to north-west direction, parallel to Jimmie Kerr Boulevard (State Route 84). The first crossing (starting at the most western end and working east) is the Trekell Road crossing, which runs in a north - south direction. From Trekell to the east .80 miles is Keeling Road. Keeling is a short road which starts just north of the railroad line at Jimmie Kerr and runs south, crossing the tracks and servicing a residential and agricultural area. Keeling dead-ends at Jimmie Kerr and does not proceed any further north of that intersection. From Keeling to the east .5 miles is Peart Road which runs in a north-south direction. Cox Rd. is the next crossing, 2.5 miles east of Peart. Cox, like Keeling, is another short road which starts at Jimmie Kerr, crosses the rail line and runs south to service two businesses. Cox dead-ends at Jimmie Kerr and does not proceed any further north of that intersection. Finally, the last crossing is an additional 1.26 miles east of Cox Road at Sunland Gin Road. Trekell and Sunland Gin Roads are the only two of the five crossings that provides access to the interstate highways in the area: Trekell to Interstate 8 and Sunland Gin to Interstate 10.

### **Trekell Road**

The proposed second main track at this crossing will be located south of the existing main track. The new industry lead track will be south of the new mainline track. The Railroad will re-profile a portion of the two lane rural asphalt road to meet the new tracks. The Railroad's proposed upgrades will replace the existing incandescent flashing lights, gate mechanisms, bells and detection circuitry, with the latest in industry standards to include: 12 inch LED flashing lights, gates, bells, and constant warning time circuitry. A new concrete crossing surface will be added, along with replacing any impacted pavement markings. The proposed measures are consistent with safety measures employed at similar at-grade crossings in the state. The estimated cost of the proposed railroad crossing upgrade is \$350,023. The Railroad is paying for the entire cost of the crossing improvements, broken down by signal and crossing surface work, with the signal work costing \$241,943 and the crossing surface \$108,080.

Traffic data for Trekell Road was provided to the Railroad by Gwen Geraci, a civil engineer for the City of Casa Grande at the time the Railroad made application to the Commission. The data provided showed the Average Daily Traffic (ADT) for 2007 to be 5,185 vpd. Data provided indicated the estimated ADT for the year 2030 to be 43,175. Staff verified this data in June 2008.

Updated data provided by Paul Tober, Casa Grande Traffic Engineer, indicated that the current (2008) counts are 5,431 vpd. Projections remain the same as those previously reported. Staff will use the more current data to analyze the crossing. The current Level of Service ("LOS") for this two lane road is LOS A, for both north and south bound traffic.

**Note:** The American Association of State Highway and Transportation Officials (AASHTO) Geometric Design of Highways and Streets, 2004, states that the Level of Service characterizes the operating conditions on a facility in terms of traffic performance measures related to speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. This is a measure of roadway congestion ranging from LOS A--least congested--to LOS F--most congested. LOS is one of the most common terms used to describe how "good" or how "bad" traffic is projected to be.

The posted speed limit on Trekell Road is 55 MPH. Commission Rail Safety Section records, as well as Federal Railroad Administration ("FRA") accident/incident records indicate one accident at Trekell Road on 3/23/94, with no injuries and no fatalities. According to the accident/incident records, the motorist drove around the down gates and was struck by a train. The records indicate the warning devices were reported to be working as intended.

Alternative routes from this crossing are as follows; to the west .72 miles to Hermosillo Street, and to the east .80 miles to Keeling Road.

### **Keeling Road**

The proposed second main track at this crossing will be south of the existing main track. In addition, the new industry lead track will be south of the new mainline track. The Railroad will re-profile a portion of the two lane asphalt road to meet the new track. The Railroad's proposed upgrades will replace the existing incandescent flashing lights, gate mechanisms, bells and detection circuitry, with the latest in industry standards to include: 12 inch LED flashing lights, gates, bells, and constant warning time circuitry. A new concrete crossing surface will be added, along with replacing any impacted pavement markings. The proposed measures are consistent with safety measures employed at similar at-grade crossings in the state. The estimated cost of the proposed railroad crossing upgrade is \$299,291. The Railroad is paying for the entire cost of the crossing improvements, broken down by signal and crossing surface improvements, with the signal improvements costing \$ 237,531, and the crossing surface \$61,760.

Traffic data provided by John Kraft of Pinal County and Jenifer Crumbliss of HDR Engineering at the time the Railroad made application to the Commission estimated the Average Daily Traffic ("ADT") for Keeling Rd. to be 310 vpd in the year 2007. No future projections were provided for this crossing. Staff

verified this data in June 2008 and found it to be accurate. The current Level of Service ("LOS") for the two lane road is LOS A, for both north and south bound traffic.

The posted speed limit on this road is 25 MPH. Commission Rail Safety Section records, as well as FRA accident/incident records indicate two accidents at this crossing, with no injuries or fatalities. The first accident occurred on 8/24/76, which was before automatic gates, flashing lights and bells were installed. Records do not indicate the cause of this accident. The second accident occurred on 11/5/89 and was the result of a train striking an unattended vehicle on the crossing. Records indicate the crossing warning devices were working as intended.

Alternative routes from this crossing are as follows; to the west .80 miles to Trekell Road, and to the east .5 miles to Peart Road, both are at-grade crossings.

### **Peart Road**

The proposed second main track at this crossing will be located south of the existing main track. The Railroad will re-profile a portion of the two lane rural asphalt road to meet the new track. The Railroad's proposed upgrades will replace the existing incandescent flashing lights, gate mechanisms, bells and detection circuitry, with the latest in industry standards to include: 12 inch LED flashing lights, gates, bells, and constant warning time circuitry. A new concrete crossing surface will be added, along with replacing any impacted pavement markings. The proposed measures are consistent with safety measures employed at similar at-grade crossings in the state. The estimated cost of the proposed railroad crossing upgrade is \$258,021. The Railroad is paying for the entire cost of the crossing improvements, broken down by signal and crossing surface improvements, with the signal work costing \$ 227,141, and the crossing surface \$30,880.

Traffic data provided by Jennifer Crumbliss of HDR Engineering at the time the Railroad made application to the Commission estimated the Average Daily Traffic ("ADT") for this crossing to be 919 vpd. This traffic count was taken in 2007. The projected ADT for the year 2025 was 59,143 vpd. Staff verified this data in June 2008 and found it to be accurate. The current Level of Service ("LOS") for the two lane road is LOS A, for both north and south bound traffic.

The posted speed limit is 45 MPH. Commission Rail Safety Section records, as well as FRA accident/incident records indicate no accidents at this crossing. Alternative routes from this crossing are as follows; to the west .5 miles to Keeling Road, and to the east 2.5 miles to Cox Road, both are at-grade crossings.

### **Cox Road**

The proposed second main track at this crossing will be south of the existing main track. The Railroad will re-profile a portion of the two lane asphalt road to meet the new track. The Railroad's proposed upgrades will replace the existing incandescent flashing lights, gate mechanisms, bells and detection circuitry, with the latest in industry standards to include: 12 inch LED flashing lights, gates, bells, and constant warning time circuitry. A new concrete crossing surface will be added, along with replacing any impacted pavement markings. The proposed measures are consistent with safety measures employed at similar at-grade crossings in the state. The estimated cost of the proposed railroad crossing upgrade is \$247,037. The Railroad is paying for the entire cost of the crossing improvements, broken down by signal and crossing surface improvements, with the signal improvements costing \$ 216,157, and the crossing surface \$30,880.

Traffic data provided by Gwen Geraci from the City of Casa Grande and Jennifer Crumbliss of HDR Engineering at the time the Railroad made application to the Commission estimated the Average Daily Traffic ("ADT") for this crossing to be 238 vpd in the year 2007. Future traffic projections were not given for this crossing. Staff verified this data in June 2008 and found it to be accurate. The current Level of Service ("LOS") for the two lane road is LOS A, for both north and south bound traffic.

The posted speed limit on this road is 25 MPH. Commission Rail Safety Section records, as well as FRA accident/incident records indicate one accident on 9/19/90. The accident was the result of a train striking a stalled vehicle on the tracks at the crossing. One employee injury was reported by the affected train crew. Records indicate the crossing warning devices were working as intended. Alternative routes from this crossing are as follows; to the west 2.5 miles to Peart and to the east 750 feet to the I-10 Overpass.

### **Sunland Gin Road**

The proposed second main track at this crossing will be south of the existing main track. The Railroad will re-profile a portion of the two lane asphalt road to meet the new track. The Railroad's proposed upgrades will replace the existing incandescent flashing lights, gate mechanisms, bells and detection circuitry, with the latest in industry standards to include: 12 inch LED flashing lights, gates, bells, and constant warning time circuitry. A new concrete crossing surface will be added, along with replacing any impacted pavement markings. The proposed measures are consistent with safety measures employed at similar at-grade crossings in the state. The estimated cost of the proposed railroad crossing upgrade is \$267,296. The Railroad is paying for the entire cost of the

crossing improvements, broken down by signal and crossing surface improvements, with the signal improvements costing \$ 220,976, and the crossing surface \$46,320.

Traffic data provided by Gwen Geraci from the City of Casa Grande at the time the Railroad made application to the Commission estimated the Average Daily Traffic ("ADT") for this crossing to be 4,492 vpd. The projected ADT for the year 2030 showed the ADT to be 47,220 vpd. Staff verified this data in June 2008. Updated data provided by Paul Tober, Casa Grande Traffic Engineer, indicated that the current (2008) counts are 5,497 vpd. Projections remain the same as those previously reported. Staff will use the more current data to analyze the crossing. The current Level of Service ("LOS") for the two lane road is LOS A, for both north and south bound traffic.

The posted speed limit on this road is 45 MPH. Commission Rail Safety Section records, as well as FRA accident/incident records indicate, no accidents have occurred at the crossing. Alternative routes from this crossing are as follows; to the west 1.2 miles to the I-10 overpass, and to the east 3.75 miles to Toltec Road.

### **Train Data**

Data provided by the railroad regarding train movements through these five crossings are as follows, and are the same for all five crossings:

**Train Count:** 48 total average trains per day (46 freight, and 2 passenger trains)

**Train Speed:** 79 mph passenger / 70 mph freight

**Thru Freight/Switching Moves:** All train movements through these five crossings are thru movements with no switching operations, according to Union Pacific, Manager of Train Operations, Rob Henderson. These crossings are used by Amtrak twice per day, three times per week.

### **Schools and Bus Routes**

Information about schools and school buses in the area was provided by HDR Engineering, Sandy Brown (Assistant Transportation Supervisor for the Casa Grande Elementary District) and Brenda Hanson (Transportation Supervisor for Casa Grande High Schools). There are no schools within four miles of Cox Road or Sunland Gin Road. There are several schools in the City of Casa Grande to the northwest of the five crossings that serve the public to the southeast of the five crossings in this application. They are as follows:

- ✓ Saguaro Elementary School @ 1801 N Center, Casa Grande, AZ 85222
- ✓ Evergreen Elementary School @ 1000 N Amarillo, Casa Grande, AZ 85222
- ✓ Cholla Elementary School @ 1180 E Kortsen, Casa Grande, AZ 85222  
Mesquite Elementary School @ 129 N Arizona, Casa Grande, AZ 85222
- ✓ Palo Verde Elementary School @ 40 N Roosevelt, Casa Grande, AZ 85222
- ✓ Casa Grande Middle School @ 300 W Mc Murray, Casa Grande, AZ 85222
- ✓ Cactus Middle School @ 1220 E Kortsen, Casa Grande, AZ 85222
- ✓ Desert Winds High School @ 1362 N Casa Grande Ave, Casa Grande, AZ 85222
- ✓ Casa Verde High School @ 1362 N Casa Grande Ave, Casa Grande, AZ 85222

Although the number of school bus crossings can vary, on average the City of Casa Grande School buses (combined) cross Trekell Road 144 times per day during the week due to the bus storage and maintenance facility located south of the tracks near Florence Street. The majority of these crossings are to retrieve and return busses to the bus storage facility and therefore, students are rarely in the buses when they travel through this crossing. Keeling Road is used 4 times per day during the week for school bus traffic and Peart, Cox, and Sunland Gin were reported as not used for busing.

On 6/10/08 Commission Staff verified information regarding the number of school bus trips over the crossings in this application. Staff spoke with Sandy Brown, Assistant Transportation Supervisor for the Casa Grande Elementary District, as well as Brenda Hanson, the Transportation Supervisor for Casa Grande High Schools. Ms. Brown indicated that there was minimal disruption to school bus service due to train blockages. Additionally, she stated the majority of the drivers prefer to use the underpass, located approximately 1 mile west of the bus facility to avoid using the crossings. Ms. Brown also indicated that Arizona Operation Lifesaver had given presentations to her drivers the last two years. The elementary school bus storage and maintenance facility is south of the railroad tracks, and all of the schools are on the north side of the tracks. Similarly, Ms. Hanson stated that her drivers had experienced minimal crossing blockage due to the trains. Ms. Hanson indicated she would welcome an Operation Lifesaver

presentation for their drivers. Staff is following-up to provide the presentation as requested.

### **Hospitals**

The nearest hospital to these crossings is Casa Grande Hospital. The following are the distances from the crossings to the hospital:

- Trekell - 2.6 miles
- Keeling - 3.4 miles
- Peart - 3.8 miles
- Cox - 4.5 miles
- Sunland Gin - 5.5 miles

### **Hazardous Materials**

The railroad gave the following response when asked about hazardous materials crossing these four crossings:

*Union Pacific has been unable to obtain any information responsive to this request. It is Union Pacific's understanding that any vehicle carrying hazardous materials may utilize public crossings unless otherwise posted, but Union Pacific knows of no way it can investigate or determine whether such vehicles use these crossings or with what frequency.*

### **Zoning**

Staff requested the Railroad provide information regarding the type of zoning in adjacent areas from the crossing. The following was their response:

*Union Pacific believes that the second part of CW 1.7 calls for speculation as to whether new housing developments, industrial parks, or other developments will occur in the future. In addition, Union Pacific does not have access to such information, but instead must rely on information provided by others. With those caveats, Union Pacific responds as follows:*

*Pinal County has a 2006 Land Use Map that matches the field diagnostic observations. The CAAG does not have an existing land use map completed at this time. The future planned zoning and the possible developments in the area of these crossings are shown on the City of Casa Grande 2010 Zoning Map and the Development Map on their website. The observed land use from the field diagnostics are shown below:*

<i>Crossing</i>	<i>2007 Observed Land Use</i>	<i>2010 Land Use</i>
<i>Trekell Road</i>	<i>Rural, Agricultural and Commercial (Transitional)</i>	<i>Commercial &amp; Low Density Residential</i>
<i>Keeling Road</i>	<i>Rural Residential (Transitional)</i>	<i>Commercial &amp; Low Density Residential</i>
<i>Peart Road</i>	<i>Industrial, Agricultural (Transitional)</i>	<i>Commercial, Employment, Low Density Residential</i>
<i>Cox Road</i>	<i>RV Park, Agricultural &amp; Employment</i>	<i>Commercial &amp; Employment</i>
<i>Sunland Gin Road</i>	<i>Commercial, Employment &amp; Rural</i>	<i>Commercial &amp; Employment</i>

*The City of Casa Grande and Pinal County planning departments can better answer the question of future developments. They review development impact studies and regulate zoning.*

### **Spur Lines**

The Union Pacific gave the following answer regarding spur lines located in the area:

*Using the definition of a "spur line" or "spur track" as "a stub track of indefinite length diverging from a main track or other track," ACC Regulation R14-5-101(20), the following spur lines have been removed inside a 10-mile radius of the crossings covered in this application.*

<b>Spur Line Removed</b>	<b>Reason for Removal</b>	<b>Date of Removal</b>
<b>* AS&amp;R spur at MP 913.82</b>	<b>Track no longer needed to serve industry</b>	<b>Approximately November, 2005</b>
<b>Apex Bulk 999-ft. spur at MP 916.00</b>	<b>Track no longer needed to serve industry</b>	<b>Unknown</b>
<b>Apex Bulk 109-ft. spur at MP 917.13</b>	<b>Track no longer needed to serve industry</b>	<b>Unknown</b>
<b>Casa Grande Dispatch 999-ft. spur at MP 918.00</b>	<b>Track no longer needed to serve industry</b>	<b>Unknown</b>

*\* This was the only at-grade crossing removed in order to remove a spur line. See Arizona Corporation Commission Decision No. 68111 docketed September 9, 2005 authorizing closure of this spur crossing.*

### **FHWA Guidelines Regarding Grade Separation**

The Federal Highway Administration (FHWA) Railroad-Highway Grade Crossing Handbook (Revised Second Edition August 2007) provides nine criteria for determining whether highway-rail crossings should be considered for grade separation or otherwise eliminated across the railroad right of way. The Crossing Handbook indicates that grade separation or crossing elimination should be considered whenever one or more of the nine conditions are met. The nine criteria are applied to this crossing application as follows:

		Trekell	Keeling	Peart	Cox	Sunland Gin
The highway is a part of the designated Interstate Highway System	Crossing Currently meets the criteria	No	No	No	No	No
	Crossing meets the criteria by 2030	No	No	No	No	No
The highway is otherwise designed to have full controlled access	Crossing Currently meets the criteria	No	No	No	No	No
	Crossing meets the criteria by 2030	No	No	No	No	No
The posted highway speed equals or exceeds 70 mph	Crossing Currently meets the criteria	No	No	No	No	No
	Crossing meets the criteria by 2030	No	No	No	No	No
AADT exceeds 100,000 in urban areas or 50,000 in rural areas	Crossing Currently meets the criteria	No	No	No	No	No
	Crossing meets the criteria by 2030 <sup>1</sup>	No	N/A	Yes	N/A	No
Maximum authorized train speed exceeds 110 mph	Crossing Currently meets the criteria	No	No	No	No	No
	Crossing meets the criteria by 2030	No	No	No	No	No
An average of 150 or more trains per day or 300 million gross tons/year	Crossing Currently meets the criteria	No	No	No	No	No
	Crossing meets the criteria by 2030 <sup>2</sup>	Yes	Yes	Yes	Yes	Yes
Crossing exposure (trains/day x AADT) exceeds 1M in urban or 250k in rural; or passenger train crossing exposure exceeds 800k in urban or 200k in rural[1]	Crossing Currently meets the criteria <sup>3</sup>	Yes	No	No	No	Yes
	Crossing meets the criteria by 2030 <sup>4</sup>	Yes	N/A	Yes	N/A	Yes
Expected accident frequency for active devices with gates, as calculated by the US DOT Accident Prediction Formula including five-year accident history, exceeds 0.5	Crossing Currently meets the criteria	No	No	No	No	No
	Crossing meets the criteria by 2030	Unknown	Unknown	Unknown	Unknown	Unknown
Vehicle delay exceeds 40 vehicle hours per day	Crossing Currently meets the criteria	No	No	No	No	No
	Crossing meets the criteria by 2030 <sup>5</sup>	Yes	N/A	Yes	N/A	Yes

N/A = Information was not available.

<sup>1</sup> This table utilizes the most recent projected ADT data as follows: Trekell – 43,175 (2030), Keeling – N/A Peart – 59,143 (2030) Cox – N/A and Sunland Gin – 47,220 (2030).

<sup>2</sup> The Railroad is projected to exceed 300 million gross tons as of 2016. This projection is based on the fact that the Railroad is currently exceeding 217 million gross tons with 46 trains per day and is projected to run twice the number of trains (at lengths of up to 8,000 feet instead of the current length of 6,000 feet) by 2016.

<sup>3</sup> The current crossing exposure for Trekell Road is 260,688 (based on 48 trains per day and 5,431 vpd). The current crossing exposure for Sunland Gin Road is 263,856 (based on 48 trains per day and 5,497 vpd).

<sup>4</sup> The projected crossing exposures utilizing the most recent projected VPD data are as follows: Trekell – 3.8 million, Keeling – N/A, Peart – 5.2 million, Cox – N/A and Sunland Gin 4.2 million.

<sup>5</sup> Projected vehicle delay per day utilizing the most recent projected VPD data are as follows: Trekell – 67.6 hours, Keeling – N/A, Peart – 113.3 hours, Cox – N/A, Sunland Gin – 73.7

## Vehicular Delays at Crossings

Based on the current single track configuration, the railroad gave the following response about delay time for vehicles at the crossings in this application. The delay time is measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset.

*Delays for vehicular (roadway) traffic caused by trains occupying a crossing depend on the length and speed of each train traversing the crossing. Because each train can be unique for these values it would be impossible for Union Pacific accurately to provide the time of delay for vehicular traffic either while allowing trains to pass the crossing or because trains are stopped in the crossing. With that caveat, Union Pacific responds as follows:*

*Union Pacific operations are governed by maximum allowable speeds as identified by timetable. Trains at the crossings involved in this application operate at timetable speeds of 65 mph and the average length of trains is approximately 6,000 feet. At that train length and speed, the average delay for vehicular traffic (1) to allow the train to pass at these crossings, measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset, is approximately 1.549 minutes.*

*The average time vehicular traffic is delayed (2) due to trains stopped on the track for any purpose, measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset, varies according to the condition creating the blockage. These varied conditions include mechanical failure such as a broken air hose, a grade crossing accident, or operations such as trains meeting or passing. Given the variety of possible conditions causing trains to be stopped on a crossing, Union Pacific does not catalog the average time vehicular traffic is delayed by stopped trains.*

*With that caveat, Union Pacific responds as follows: A.R.S. § 40-852 requires that, except in cases of unavoidable accident, a train blocking a crossing for more than 15 minutes must be cut to facilitate traffic flow. ACC Regulation R14-5-104(C)(7) and Union Pacific's operating practices allow a train to block a public grade crossing for no more than 10 continuous minutes, unless the train is continuously moving in the same direction during the entire time it occupies the crossing, or the blockage is caused by wrecks, derailments, acts of nature, mechanical failure, or other emergency conditions.*

Based on the railroad's double tracking project, and the projected number of 84 trains per day through this crossing by the year 2016, the railroad gave this

response as to what future delay times would be for vehicles at the crossings in this application

*Delays for vehicular (roadway) traffic caused by trains occupying a crossing depend on the length and speed of each train traversing the crossing. Because each train can be unique for these values it would be impossible for Union Pacific accurately to provide the time of delay for vehicular traffic either while allowing trains to pass the crossing or because trains are stopped in the crossing. With that caveat, Union Pacific responds as follows:*

*Union Pacific operations are governed by maximum allowable speeds as identified by timetable. Trains at the crossings involved in this application are projected to operate at timetable speeds of 65 mph and the average length of trains is projected to be approximately 8,000 feet. At that train length and speed, the average delay for vehicular traffic at these crossings in 2016 (1) to allow the train to pass at the crossing, measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset, is projected to be approximately 1.899 minutes.*

*The average time vehicular traffic is delayed (2) due to trains stopped on the track for any purpose, measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset, varies according to the condition creating the blockage. These varied conditions include mechanical failure such as a broken air hose, a grade crossing accident, or operations such as trains meeting or passing. Given the variety of possible conditions causing trains to be stopped on a crossing, Union Pacific does not catalog the average time vehicular traffic is delayed by stopped trains.*

*With that caveat, Union Pacific responds as follows: A.R.S. § 40-852 requires that, except in cases of unavoidable accident, a train blocking a crossing for more than 15 minutes must be cut to facilitate traffic flow. ACC Regulation R14-5-104(C)(7) and Union Pacific's operating practices allow a train to block a public grade crossing for no more than 10 continuous minutes, unless the train is continuously moving in the same direction during the entire time it occupies the crossing, or the blockage is caused by wrecks, derailments, acts of nature, mechanical failure, or other emergency conditions.*

A traffic delay and queuing analysis was performed for three of the five crossings in this application utilizing formulas found in the Transportation and Traffic Engineering Handbook, Second Edition. This document is published by the Institute of Transportation Engineers (ITE). Due to the low volume of vehicular traffic (Keeling 310 vpd and Cox 238 vpd) a traffic delay and queuing analysis was not performed for these two crossings. Additionally, there are no future traffic projections for Keeling and Cox. Staff verified this information on

6/10/08 with John Kraft from the County and Paul Tober from the City. Using the most current ADT data available, it was determined that the current daily vehicle delays at the crossings are as follows:

Trekell Road	2.3 hours of delay per day
Keeling Road	N/A
Pearl Road	0.3 hours of delay per day
Cox Road	N/A
Sunland Gin Road	2.2 hours of delay per day

Using the most current data regarding projected future ADT and the Railroad's projection of 84 trains per day, it was determined that daily vehicle delays in the year 2030 may be as follows:

Trekell Road	67.6 hours of delay per day
Keeling Road	N/A
Pearl Road	113.3 hours of delay per day
Cox Road	N/A
Sunland Gin Road	73.7 hours of delay per day

Current delays fall well below the FHWA recommended threshold of 40 delay hours per day. Trekell, Pearl and Sunland Gin are projected (2030) to have delays in excess of the 40 hours specified in the FHWA Guidelines. It would be highly likely that the road authority would undergo a project to widen these roads before vehicle delays reach this point. Roadway widening would be one alternative for reducing the delay times for vehicles at the crossing.

Another commonly used measure outlined in the FHWA Guidelines, the so-called Crossing Exposure Index (which is simply the product of the number of trains per day multiplied by the number of vehicles crossing daily) is currently met at the Trekell and Sunland Gin crossings (with current exposure index of 260,688 for Trekell and 263,856 for Sunland Gin). Using future projected traffic volumes for 2030, Trekell, Pearl and Sunland Gin are likely to exceed the FHWA threshold for rural areas of 250,000. It should be noted that the criteria identified in the FHWA material are not mandates, but Guidelines established by the Federal Highway Administration, which serve to alert those having jurisdiction that potential problems may arise. Despite the current lull in home building, the likelihood of continued growth in the corridor between the Cities of Casa Grande and Eloy is very strong and the projected traffic volumes for the roadways in question could potentially be underestimated.

## Grade Separation

With regard to grade separating any of the crossings, the Railroad gave the following response:

*Union Pacific understands that whether a grade separation is needed is primarily a question of mobility and convenience for vehicular traffic on the roadway, not safety. That is because an at-grade crossing can be safe without constructing a grade separation and eliminating the grade crossing. Based on this understanding, Union Pacific believes the question of whether a grade separation is needed is irrelevant to Union Pacific's application to add a second mainline track at these grade crossings. With that caveat, Union Pacific responds as follows:*

*In addition to the foregoing, grade separation is not appropriate for determination at this time because the local communities and roadway authorities have not finally determined whether grade separations at these crossings are desired by those communities and authorities, what priority grade separations would have with respect to other public projects, when construction of grade separations could be begun and finished, and how grade separations would be funded. Union Pacific is aware that the local communities and roadway authorities are studying these matters (including ADOT's study concerning Maricopa Road) outside the context of Union Pacific's applications for grade crossing alterations.*

*Furthermore, Union Pacific believes the five crossings involved in this application are safe without constructing grade separations. This conclusion is supported by the fact that the Federal Highway Administration authorizes the use of gates and lights at multiple-track grade crossings as proposed in this application.*

Staff has utilized the FHWA Guidelines to determine the potential need for grade separation at these crossings.

Based on currently existing conditions, three of the five crossings in this application do not meet any of the nine criteria for consideration of grade separation. Two crossings (Trekell and Sunland Gin) meet only one of the nine criteria. Therefore, Staff does not recommend that grade separation be seriously considered for any of these crossings at this time.

Projected data indicates that Trekell, Peart and Sunland Gin are likely to meet four of the nine criteria and Keeling and Cox are likely to meet one of the nine criteria by the year 2030. Staff would encourage the City, County and the Railroad to monitor these crossings to determine the need for grade separation at a future time.

### **Crossing Closure**

Given the amount of growth in the area, and the projected future ADT for Trekell, Peart and Sunland Gin, Staff would not recommend a closure of any of these crossings at this time. While ADT counts are low for Keeling and Cox, Staff would not recommend closure of these two crossings because of the possibility of "land-locking" land owners and businesses.

### **Pinal County Support**

According to a letter dated January 9, 2008 by David Snider, Chairman, Pinal County Board of Supervisors, Pinal County is in full support of Union Pacific's double track project. Specifically, Pinal County fully supports and approves Union Pacific's construction of one additional main track over and across public roadway crossings of the Union Pacific tracks within Pinal County. Additionally, the letter requests the Arizona Corporation Commission approve each application filed by Union Pacific for authority to install a second main track, at grade for all crossings within Pinal County.

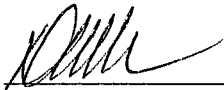
### **Agreement for Construction and Funding of Grade Separations**

On May 27, 2008, Pinal County and the Cities of Eloy, Casa Grande and Maricopa entered into an agreement with Union Pacific for the construction and funding of future grade separations. According to the agreement, Union Pacific will contribute a total of \$35 million toward the construction of four separate grade separations. The identity of the four grade separations and the amount to be contributed by Union Pacific for each grade separation shall be determined by the County or by the individual City. However, the four grade separations are to replace four existing at grade crossings that are equipped with warning devices and shall be a grade crossing listed on "Exhibit A" (see attached Exhibit A). The agreement further states that the construction of a grade separation shall result in the closure of the crossing that the grade separation is to replace, or at another crossing location determined by the County or the City. When an application to construct a grade separation is submitted to the Commission for approval, the application must include the closing of a crossing determined by the applicant. If the Commission denies the grade crossing closure, the grade separation will not qualify for funding by the Union Pacific.

### **Staff Conclusions**

Having reviewed all applicable data, Staff generally supports the Railroad's application. Staff believes that the upgrades are in the public interest and are reasonable. However, Staff notes that, for Trekell and Sunland Gin, one of the nine FHWA criteria have already been met. This indicates that grade separation should be considered for Trekell and Sunland Gin. In addition, Staff

notes that a second criterion (vehicular delay exceeds 40 vehicle hours per day) is likely to be met by 2030. Staff understands that the decision to grade separate is a complex one involving multiple parties, a number of years of time for planning and construction as well as substantial monetary resources. Staff strongly encourages the City of Casa Grande, Pinal County and the Railroad to make one or more of these crossings a priority for grade separation and initiate such a project within the next 5-10 years. Having said that, Staff believes that the measures proposed by the Railroad are consistent with other similar at-grade crossings in the State and will provide for the public's safety in the interim period of time until a grade separation could be constructed. Therefore, Staff recommends approval of the Railroad's application.



Dave Raber  
Director  
Safety Division



Brian H. Lehman  
Railroad Supervisor  
Safety Division

**ARIZONA CORPORATION COMMISSION**  
**UNION PACIFIC'S RESPONSES TO REVISED FIRST SET OF DATA REQUESTS**  
**DOCKET NO. RR-03639A-07-0519**

**Trekell Road, Keeling Road, Peart Road, Cox Road and  
Sunland Gin Road in Pinal County & City of Casa Grande, AZ**

**DECEMBER 7, 2007**

CW 1.1 Provide Average Daily Traffic Counts ("ADT") for each of the five locations.

**Response:** *With the exception of Keeling Road, Peart Road, and Cox Road, as to which HDR provided the information, Union Pacific Railroad Company ("Union Pacific") must rely on information provided by others to provide ADT's. With that caveat, Union Pacific responds as follows:*

<i>Crossing</i>	<i>Current ADT</i>	<i>Source</i>
<i>Trekell Road</i>	<i>5,185</i>	<i>CAAG 2007 Traffic Count data provided by Gwen Geraci</i>
<i>Keeling Road</i>	<i>310</i>	<i>2007 Traffic Counts by HDR</i>
<i>Peart Road</i>	<i>991</i>	<i>2007 Traffic Counts by HDR</i>
<i>Cox Road</i>	<i>238</i>	<i>2007 Traffic Counts by HDR</i>
<i>Sunland Gin Road</i>	<i>4,492</i>	<i>CAAG 2007 Traffic Count data provided by Gwen Geraci</i>

**Source:**

- 1) John Kraft @ Pinal County, PO Box 727, Florence, AZ 85232, (520) 866-6480. (Pinal County Counts-None Current)*
- 2) Jennifer Crumbliss, HDR Engineering, 8404 Indian Hills Drive, Omaha, NE 68114. (HDR Traffic Counts)*
- 3) Gwen Geraci, City of Casa Grande Civil Engineer, 3181 N. Lear Avenue, Casa Grande, AZ (520) 421-8625 (City of Casa Grande Traffic Counts)*

CW 1.2 Please describe the current Level of Service ("LOS") at each intersection.

**Response:** *Union Pacific believes that the level of service analysis is concerned with mobility rather than safety. In addition, with the exception of Keeling Road, Peart Road, and Cox Road, as to which HDR provided the information, Union Pacific must rely on information provided by others to calculate the level of service. With those caveats, Union Pacific responds as follows:*

<i>Crossing</i>	<i>LOS</i>
<i>Trekell Road</i>	<i>Northbound (LOS=A), Southbound (LOS=A)</i>
<i>Keeling Road</i>	<i>Northbound (LOS=A), Southbound (LOS=A)</i>
<i>Peart Road</i>	<i>Northbound (LOS=A), Southbound (LOS=A)</i>
<i>Cox Road</i>	<i>Northbound (LOS=A), Southbound (LOS=A)</i>
<i>Sunland Gin Road</i>	<i>Northbound (LOS=A), Southbound (LOS=A)</i>

**Source:** *Traffic level of service calculations were performed using Synchro and SimTraffic programs under the direction of Heidi Schneider with HDR Engineering, Inc at 5210 E Williams Circle, Suite 503, Tucson, AZ 85711, (520) 584-3600. The train delay times utilized in the analysis were provided by Tom Domres, with TKDA at 750 Shoreline Drive, Suite 100, Aurora, IL 60504, (630) 499-4110 via Union Pacific.*

CW 1.3 Provide any traffic studies done by the road authorities for each area.

**Response:** 1) *The 2007 Pinal County Comprehensive Plan on <http://www.co.pinal.az.us/PlanDev/PDCP/CPInfo.asp>*  
2) *2006 Pinal County SATS (Small Area Transportation Study) on <http://www.co.pinal.az.us/PubWorks> under "Downloads"*  
3) *2007 Final City of Casa Grande SATS on [http://www.ci.casa-grande.az.us/dev\\_center/development\\_center.php](http://www.ci.casa-grande.az.us/dev_center/development_center.php)*  
4) *Other development traffic studies and the Target Distribution Center Impact Study @ Sunland Gin Rd contact:*  
*Leila A. DeMaree, Senior Planner*  
*City of Casa Grande*  
*510 E. Florence Blvd.,*  
*Casa Grande, AZ 85222*

CW 1.4 Provide distances in miles to the next public crossing on either side of the proposed project location. Are any of these grade separations?

**Response:** *Union Pacific believes that the last question in CW 1.4 raises an issue that is irrelevant, namely, whether either of the next public crossings is a grade separation. With that caveat, Union Pacific responds as follows:*

<i>Crossing</i>	<i>TO THE WEST</i>	<i>TO THE EAST</i>
<i>Trekell Road</i>	<i>0.72 miles to Hermosilla St</i>	<i>0.80 miles to Keeling Rd</i>
<i>Keeling Road</i>	<i>0.80 miles to Trekell Rd</i>	<i>0.5 miles to Peart Rd</i>
<i>Peart Road</i>	<i>0.5 miles to Keeling Rd</i>	<i>2.5 miles to Cox Rd</i>
<i>Cox Road</i>	<i>2.5 miles to Sunland Gin Rd</i>	<i>750 feet to I-10 Overpass</i>
<i>Sunland Gin Road</i>	<i>750 feet to I-10 Overpass</i>	<i>3.75 miles to Toltec Road</i>

*The only adjacent crossing that is a grade separation is at I-10 just 750 feet west of Cox Road.*

**Source:** *HDR's use of the Union Pacific Straight-line Diagrams and [www.MapQuest.com](http://www.MapQuest.com).*

CW 1.5 How and why was grade separation not decided on at this time? Please provide any studies that were done to support these answers.

*Response: Union Pacific understands that whether a grade separation is needed is primarily a question of mobility and convenience for vehicular traffic on the roadway, not safety. That is because an at-grade crossing can be safe without constructing a grade separation and eliminating the grade crossing. Based on this understanding, Union Pacific believes the question of whether a grade separation is needed is irrelevant to Union Pacific's application to add a second mainline track at these grade crossings. With that caveat, Union Pacific responds as follows:*

*In addition to the foregoing, grade separation is not appropriate for determination at this time because the local communities and roadway authorities have not finally determined whether grade separations at these crossings are desired by those communities and authorities, what priority grade separations would have with respect to other public projects, when construction of grade separations could be begun and finished, and how grade separations would be funded. Union Pacific is aware that the local communities and roadway authorities are studying these matters (including ADOT's study concerning Maricopa Road) outside the context of Union Pacific's applications for grade crossing alterations.*

*Furthermore, Union Pacific believes the five crossings involved in this application are safe without constructing grade separations. This conclusion is supported by the fact that the Federal Highway Administration authorizes the use of gates and lights at multiple-track grade crossings as proposed in this application.*

CW 1.6 If this crossing were to be grade separated, provide a cost estimate of the project.

*Response: Again, Union Pacific understands that whether a grade separation is needed is primarily a question of mobility and convenience for vehicular traffic on the roadway, not safety. That is because an at-grade crossing can be safe without constructing a grade separation and eliminating the grade crossing. Based on this understanding, Union Pacific believes the question of whether a grade separation is needed is irrelevant to Union Pacific's application to add a second mainline track at these grade crossings. In addition, any attempt to estimate the cost to construct a grade separation would be speculative in the absence of a detailed study of the particular crossing in question. With those caveats, Union Pacific responds as follows:*

*In connection with its recent application to upgrade the crossing of Union Pacific tracks at the intersection of Power and Pecos Roads, RR-03639A-07-0398, the Town of Gilbert estimated that a grade separation at that location would cost \$22 million. Depending on the*

*particular crossing involved, a reasonable range for the costs of constructing a grade separation would be between \$20 million and \$40 million.*

CW 1.7 Please describe what the surrounding areas are zoned for near this intersection. i.e. Are there going to be new housing developments, industrial parks, etc.?

**Response:** *Union Pacific believes that the second part of CW 1.7 calls for speculation as to whether new housing developments, industrial parks, or other developments will occur in the future. In addition, Union Pacific does not have access to such information, but instead must rely on information provided by others. With those caveats, Union Pacific responds as follows:*

*Pinal County has a 2006 Land Use Map that matches the field diagnostic observations. The CAAG does not have an existing land use map completed at this time. The future planned zoning and the possible developments in the area of these crossings are shown on the City of Casa Grande 2010 Zoning Map and the Development Map on their website. The observed land use from the field diagnostics are shown below:*

<i>Crossing</i>	<i>2007 Observed Land Use</i>	<i>2010 Land Use</i>
<i>Trekell Road</i>	<i>Rural, Agricultural and Commercial (Transitional)</i>	<i>Commercial &amp; Low Density Residential</i>
<i>Keeling Road</i>	<i>Rural Residential (Transitional)</i>	<i>Commercial &amp; Low Density Residential</i>
<i>Peart Road</i>	<i>Industrial, Agricultural (Transitional)</i>	<i>Commercial, Employment, Low Density Residential</i>
<i>Cox Road</i>	<i>RV Park, Agricultural &amp; Employment</i>	<i>Commercial &amp; Employment</i>
<i>Sunland Gin Road</i>	<i>Commercial, Employment &amp; Rural</i>	<i>Commercial &amp; Employment</i>

*The City of Casa Grande and Pinal County planning departments can better answer the question of future developments. They review development impact studies and regulate zoning.*

**Source:** 1) 2006 Pinal County SATS (Small Area Transportation Study) on <http://www.co.pinal.az.us/PubWorks> under "Downloads"  
 2) The Central Arizona Association of Governments' Planning Department (CAAG) <http://www.caagcentral.org/GIS/gishome.html>  
 3) The City of Casa Grande <http://www.ci.casa-rande.az.us/gis/maps.php>  
 Leila A. DeMaree, Senior Planner  
 City of Casa Grande  
 510 E. Florence Blvd.,  
 Casa Grande, AZ 85222

CW 1.8 Please supply the following: number of daily train movements through the crossing, speed of the trains, and the type of movements being made (i.e. thru freight or switching). Is this a passenger train route?

*Response: The movements are the same for these five crossings.*

*Train Count: 48 total average trains per day (46 freight, 2 passenger)*

*Train Speed: 79 mph passenger / 70 mph freight*

*Thru Freight/Switching Moves: All moves through these five crossings are thru freight. (According to MTO Rob Henderson there are no switching moves at these crossings.)*

*These crossings are used by Amtrak twice per day, three times per week.*

*Source: Union Pacific's Manager of Train Operations, Rob Henderson.*

CW 1.9 Please provide the names and locations of all schools (elementary, junior high and high school) within the area of the crossing.

*Response:*

*There are no schools within four miles of Cox Road or Sunland Gin Road. There are several schools in the City of Casa Grande, to the northwest of the five crossings, that serve the public to the southeast of the five crossings in this application.*

*Saguaro Elementary School @ 1801 N Center, Casa Grande, AZ 85222*

*Evergreen Elementary School @ 1000 N Amarillo, Casa Grande, AZ 85222*

*Cholla Elementary School @ 1180 E Kortsen, Casa Grande, AZ 85222*

*Mesquite Elementary School @ 129 N Arizola, Casa Grande, AZ 85222*

*Palo Verde Elementary School @ 40 N Roosevelt, Casa Grande, AZ 85222*

*Casa Grande Middle School @ 300 W Mc Murray, Casa Grande, AZ 85222*

*Cactus Middle School @ 1220 E Kortsen, Casa Grande, AZ 85222*

*Desert Winds High School @ 1362 N Casa Grande Ave, Casa Grande, AZ 85222*

*Casa Verde High School @ 1362 N Casa Grande Ave, Casa Grande, AZ 85222*

*Source:*

- 1) Jennifer Crumbliss, Senior Transportation Engineer with HDR, Engineering, Inc. at 8404 Indian Hills Drive, Omaha, NE 68114, (402) 926-7049 used the internet site [www.GoggleEarth.com](http://www.GoggleEarth.com) also, Juan Cruz, Roadway Designer with HDR in Tucson, physically verified hospital and school locations on June 14, 2007.*
- 2) Sandy Brown, Assistant Transportation Supervisor for Casa Grande Elementary District #4 located at 1400 N. Pinal Ave, Casa Grande, AZ 85222, (520) 836-5231.*
- 3) Brenda Hanson, Transportation Supervisor for Casa Grande High School @ 300 W McMurray, Casa Grande, AZ 85222, (520) 316-3382.*

CW 1.10 Please provide school bus route information concerning the crossing, including the number of times a day a school bus crosses this crossing.

**Response:** *Although the number of school bus crossings can vary, on average the City of Casa Grande School buses, combined, cross Trekell Road 144 times per day during the week due to the bus yard location to the south of Florence Street, and cross Keeling Road 4 times per day during the week. Peart Road, Cox Road and Sunland Gin Road are not used for busing to our knowledge.*

**Source:** *Sandy Brown, Assistant Transportation Supervisor for Casa Grande Elementary District #4 located at 1400 N. Pinal Ave, Casa Grande, AZ 85222, (520) 836-5231.  
Brenda Hanson, Transportation Supervisor for Casa Grande High School @ 300 W McMurray, Casa Grande, AZ 85222, (520) 316-3382.*

CW 1.11 Please provide information about any hospitals in the area and whether the crossing is used extensively by emergency service vehicles.

**Response:** *The nearest hospital to these crossings is Casa Grande Regional Hospital (approximately 4 miles northeast of Thornton Road). To our knowledge, none of these crossings are used extensively by emergency service vehicles.*

**Source:** *Jennifer Crumbliss, Senior Transportation Engineer with HDR, Engineering, Inc. at 8404 Indian Hills Drive, Omaha, NE 68114, (402) 926-7049 used the internet site [www.GoogleEarth.com](http://www.GoogleEarth.com) also, Juan Cruz, Roadway Designer with HDR in Tucson, physically verified hospital and school locations on June 14, 2007.*

CW 1.12 Please provide the total cost of improvements to each crossing.

**Response:**

Crossing	Crossing Surface	Signal	Total
Trekell Road	\$108,080.00*	\$241,943.00	\$350,023.00
Keeling Road	\$ 61,760.00**	\$237,531.00	\$299,291.00
Peart Road	\$ 30,880.00	\$227,141.00	\$258,021.00
Cox Road	\$ 30,880.00	\$216,157.00	\$247,037.00
Sunland Gin Road	\$ 46,320.00	\$220,976.00	\$267,296.00

*\*This is the total projected cost of two new crossing surfaces proposed at the Trekell Road crossing. The second mainline track will cost \$69,480.00 and the new siding track will cost \$38,600.00.*

***\*\*This is the total projected cost of two sets of new crossing surfaces proposed at the Keeling Road crossing, each costing \$30,880.00.***

***Source: Union Pacific's Engineering.***

ORIGINAL AND THIRTEEN COPIES  
of the foregoing filed this 7<sup>th</sup> day of  
December, 2007, with:

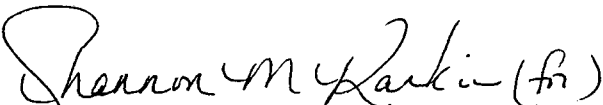
Arizona Corporation Commission  
1200 West Washington Street  
Phoenix, Arizona 85007

COPY of the foregoing e-mailed and  
mailed this 6<sup>th</sup> day of December, 2007, to:

Mr. David Raber  
Mr. Brian Lehman  
Mr. Chris Watson  
Railroad Safety Section  
Arizona Corporation Commission  
2200 North Central Avenue, #300  
Phoenix, Arizona 85004

COPY of the foregoing hand-delivered  
this 7<sup>th</sup> day of December, 2007, to:

Janice M. Alward, Esq.  
Charles H. Hains, Esq.  
Kenya Collins, Esq.  
Legal Division  
Arizona Corporation Commission  
1200 West Washington Street  
Phoenix, Arizona 85007

  
Mary Ann Palmer

Chris Watson

RECEIVED

2008 APR -3 P 4: 20

AZ CORP COMMISSION  
DOCKET CONTROL

**ARIZONA CORPORATION COMMISSION  
UNION PACIFIC'S RESPONSES TO STAFF'S SECOND SET OF DATA REQUESTS  
DOCKET NO. RR-03639A-07-0519  
Trekell Road, Keeling Road, Peart Road, Cox Road, Sunland Gin Road  
APRIL 4, 2008**

CW 2.1 Based on the current single track configuration at the crossings specified by this application, please provide the current traffic blocking delay per train. Please indicate the time in which vehicular traffic is delayed (1) to allow the train to pass at a crossing and (2) due to trains stopped on the track for any purpose. The delay is measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset.

***Response:*** Delays for vehicular (roadway) traffic caused by trains occupying a crossing depend on the length and speed of each train traversing the crossing. Because each train can be unique for these values it would be impossible for Union Pacific accurately to provide the time of delay for vehicular traffic either while allowing trains to pass the crossing or because trains are stopped in the crossing. With that caveat, Union Pacific responds as follows:

Union Pacific operations are governed by maximum allowable speeds as identified by timetable. Trains at the crossings involved in this application operate at timetable speeds of 65 mph and the average length of trains is approximately 6,000 feet. At that train length and speed, the average delay for vehicular traffic (1) to allow the train to pass at these crossings, measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset, is approximately 1.549 minutes.

The average time vehicular traffic is delayed (2) due to trains stopped on the track for any purpose, measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset, varies according to the condition creating the blockage. These varied conditions include mechanical failure such as a broken air hose, a grade crossing accident, or operations such as trains meeting or passing. Given the variety of possible conditions causing trains to be

stopped on a crossing, Union Pacific does not catalog the average time vehicular traffic is delayed by stopped trains.

With that caveat, Union Pacific responds as follows: A.R.S. § 40-852 requires that, except in cases of unavoidable accident, a train blocking a crossing for more than 15 minutes must be cut to facilitate traffic flow. ACC Regulation R14-5-104(C)(7) and Union Pacific's operating practices allow a train to block a public grade crossing for no more than 10 continuous minutes, unless the train is continuously moving in the same direction during the entire time it occupies the crossing, or the blockage is caused by wrecks, derailments, acts of nature, mechanical failure, or other emergency conditions.

*Source:* Union Pacific's Engineering, in consultation with TKDA at 750 Shoreline Drive, Suite 100, Aurora, IL 60504, (630) 499-4110

CW 2.2 Based on anticipated double tracking at the crossings covered by this application and projected train traffic of 84 trains per day by 2016, please provide the projected (2016) blocking delay per train. Please indicate the time in which vehicular traffic is delayed (1) to allow the train to pass at a crossing and (2) due to trains stopped on the track for any purpose. The delay is measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset.

*Response:* Delays for vehicular (roadway) traffic caused by trains occupying a crossing depend on the length and speed of each train traversing the crossing. Because each train can be unique for these values it would be impossible for Union Pacific accurately to provide the time of delay for vehicular traffic either while allowing trains to pass the crossing or because trains are stopped in the crossing. With that caveat, Union Pacific responds as follows:

Union Pacific operations are governed by maximum allowable speeds as identified by timetable. Trains at the crossings involved in this application are projected to operate at timetable speeds of 65 mph and the average length of trains is projected to be approximately 8,000 feet. At that train length and speed, the average delay for vehicular traffic at these crossings in 2016 (1) to allow the train to pass at the crossing, measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset, is projected to be approximately 1.899 minutes.

The average time vehicular traffic is delayed (2) due to trains stopped on the track for any purpose, measured from the point that the

warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset, varies according to the condition creating the blockage. These varied conditions include mechanical failure such as a broken air hose, a grade crossing accident, or operations such as trains meeting or passing. Given the variety of possible conditions causing trains to be stopped on a crossing, Union Pacific does not catalog the average time vehicular traffic is delayed by stopped trains.

With that caveat, Union Pacific responds as follows: A.R.S. § 40-852 requires that, except in cases of unavoidable accident, a train blocking a crossing for more than 15 minutes must be cut to facilitate traffic flow. ACC Regulation R14-5-104(C)(7) and Union Pacific's operating practices allow a train to block a public grade crossing for no more than 10 continuous minutes, unless the train is continuously moving in the same direction during the entire time it occupies the crossing, or the blockage is caused by wrecks, derailments, acts of nature, mechanical failure, or other emergency conditions.

**Source:** Union Pacific's Engineering, in consultation with TKDA at 750 Shoreline Drive, Suite 100, Aurora, IL 60504, (630) 499-4110

CW 2.3 Please provide the posted vehicular speed limit for the roads intersecting each crossing covered in this application.

**Response:**

Crossing	Posted Vehicular Speed Limit
Trekell Road	55 mph *
Keeling Road	25 mph *
Peart Road	45 mph *
Cox Road	25 mph *
Sunland Gin Road	45 mph *

\* The speed limits given are those posted for the roads intersecting these crossings. However as a practical matter, maximum speed for vehicular traffic at these crossings is approximately 15 mph because these crossings are within 150 feet of a stop condition.

**Source:** Jennifer Crumbliss, Senior Transportation Engineer with HDR Engineering, Inc. at 8404 Indian Hills Drive, Omaha, NE 68114

CW 2.4 Please provide information as to whether passenger buses (other than school buses) utilize th[ese] crossing[s] and the number of times a day a passenger bus crosses.

**Response:** Union Pacific does not have access to such information, but instead must rely on information provided by others. With that caveat, Union Pacific responds that it is not aware of any public passenger buses that utilize the crossings involved in this application.

**Source:**

- 1) Christine McMurdy, Public Works Department, City of Goodyear, 190 N. Litchfield Road, Goodyear, AZ 85338, (623) 932-1637
- 2) Karen Thomas, GIS Services Department, City of Maricopa, 45145 W. Madison Avenue, P.O. Box 610, Maricopa, AZ 85239, (520) 568-9098
- 3) Aaron Cart, GIS Department, City of Casa Grande, 510 E. Florence Blvd., Casa Grande, AZ 85222, (520) 421-8625
- 4) Belinda Cota, Planning Department, City of Eloy, 628 N. Main Street, Eloy, AZ 85231, (520) 466-2578

CW 2.5 Please provide information as to whether vehicles carrying hazardous materials utilize th[ese] crossing[s] and the number of times a day a vehicle carrying hazardous materials crosses.

**Response:** Union Pacific has been unable to obtain any information responsive to this request. It is Union Pacific's understanding that any vehicle carrying hazardous materials may utilize public crossings unless otherwise posted, but Union Pacific knows of no way it can investigate or determine whether such vehicles use these crossings or with what frequency.

CW 2.6 Please indicate whether any spur lines have been removed within the last three years inside a 10 mile radius of any crossings covered in this application. Please include the reason for the removal, date of the removal and whether an at-grade crossing or crossings were removed in order to remove the spur line.

**Response:** Using the definition of a "spur line" or "spur track" as "a stub track of indefinite length diverging from a main track or other track," ACC Regulation R14-5-101(20), the following spur lines have been removed inside a 10-mile radius of the crossings covered in this application.

Spur Line Removed	Reason for Removal	Date of Removal
* AS&R spur at MP 913.82	Track no longer needed to serve industry	Approximately November, 2005
Apex Bulk 999-ft. spur at MP 916.00	Track no longer needed to serve industry	Unknown
Apex Bulk 109-ft. spur at MP 917.13	Track no longer needed to serve industry	Unknown
Casa Grande Dispatch 999-ft. spur at MP 918.00	Track no longer needed to serve industry	Unknown

\* This was the only at-grade crossing removed in order to remove a spur line. See Arizona Corporation Commission Decision No. 68111 docketed September 9, 2005 authorizing closure of this spur crossing.

**Source:** Union Pacific's Engineering

CW 2.7 Please indicate which, if any, spur lines have been removed within the last three years inside a 10 mile radius of any crossings covered in this application were done at the direction or request of (1) the relevant road authority, (2) the industry served by the spur line, or (3) by the railroad.

**Response:** To the best of Union Pacific's present knowledge, all of the spur lines shown above were removed at the direction or request of the railroad.

**Source:** Union Pacific's Engineering

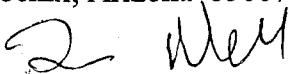
ORIGINAL AND THIRTEEN COPIES  
of the foregoing filed this 3 day of  
April, 2008, with:

Arizona Corporation Commission  
1200 West Washington Street  
Phoenix, Arizona 85007

COPY of the foregoing e-mailed and  
mailed this 3 day of April, 2008, to:

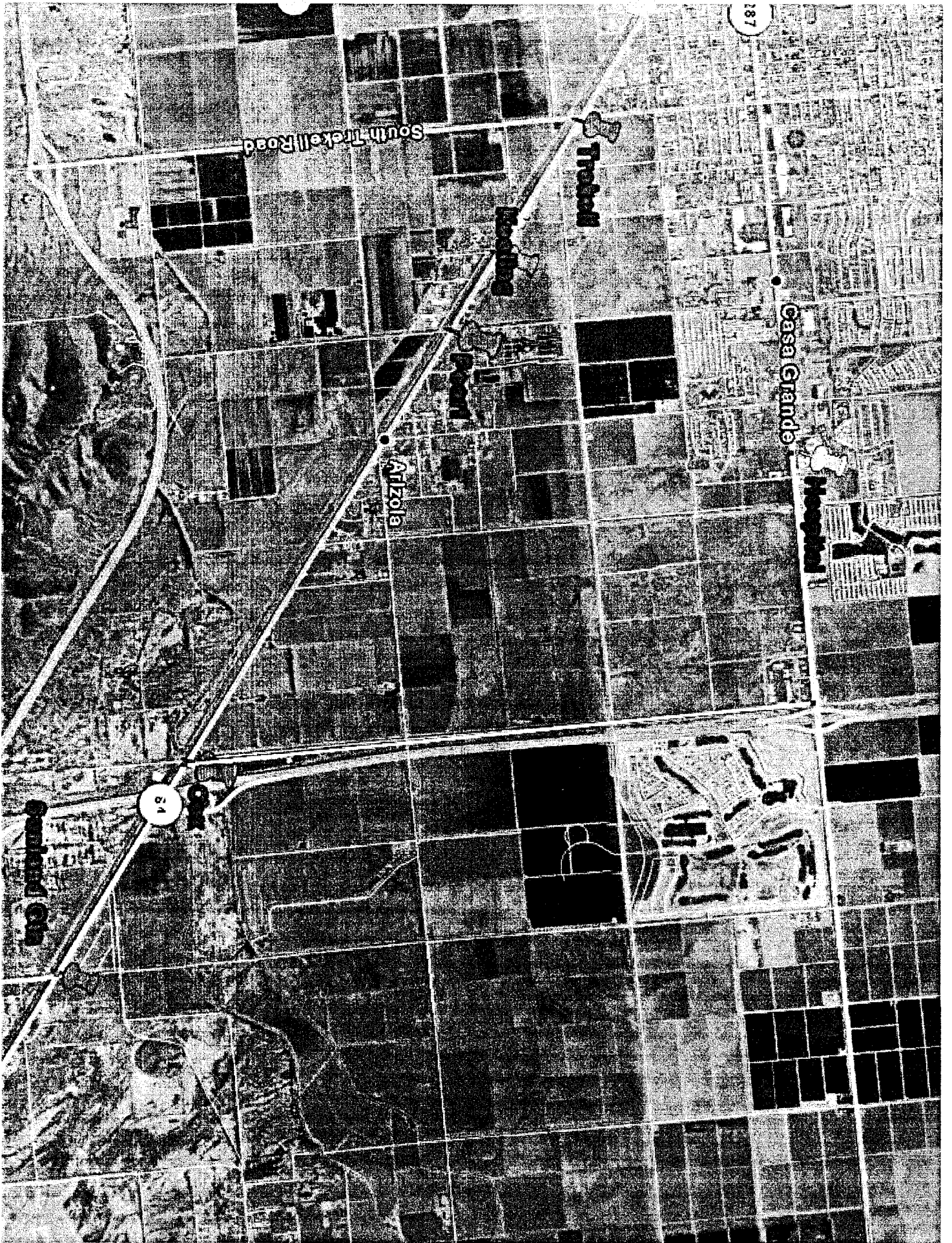
Mr. David Raber  
Mr. Brian Lehman  
Mr. Chris Watson  
Railroad Safety Section  
Arizona Corporation Commission  
2200 North Central Avenue, #300  
Phoenix, Arizona 85004

Charles H. Hains, Esq.  
Legal Division  
Arizona Corporation Commission  
1200 West Washington Street  
Phoenix, Arizona 85007

---

Dan Norkol



PINAL COUNTY  
BOARD OF SUPERVISORS

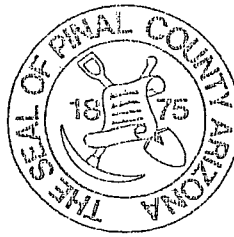
CHRIS WATSON

LIONEL D. RUIZ, District 1  
Mammoth

SANDIE SMITH, District 2  
Apache Junction

DAVID SNIDER, District 3  
Casa Grande

January 9, 2008



RECEIVED

2008 JAN 15 A 10:07

AZ CORP COMMISSION  
DOCKET CONTROL

TERRY DOOLITTLE  
County Manager

Mr. David Raber  
Director, Safety Division  
Arizona Corporation Commission  
2200 North Central Avenue  
Suite 300  
Phoenix, Arizona 85004

RR 03639A-07-0519

Re: Support for Union Pacific Railroad Company's Double-Track Project

Dear Mr. Raber:

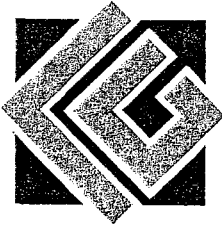
This letter will serve to inform you that Pinal County fully supports Union Pacific Railroad Company's project to construct a second main line railroad track through Pinal County and the State of Arizona, known as "Union Pacific's Double-Track Project." Specifically, Pinal County fully supports and approves, and will to cooperate with Union Pacific concerning, construction of one additional main track over and across public roadway crossings of the Union Pacific Railroad tracks at grade within Pinal County, as listed on Exhibit A attached hereto. Pinal County therefore requests that the Arizona Corporation Commission approve each application filed by Union Pacific for authority to install a second main line railroad track at grade at those crossings listed on Exhibit A.

If it would be helpful to the Commission or its Staff, Pinal County would be pleased to have its representative appear at any hearings or meetings concerning Union Pacific's crossing alteration applications to the Commission to confirm the County's support and approval of those applications. If you have any questions or wish to discuss the County's position with respect to these matters, please do not hesitate to contact me.

Sincerely,

David Snider, Chairman

c: Board of Supervisors  
Ken Buchanan, Assistant County Manager  
for Development Services  
Chief Civil Deputy County Attorney, Chris Roll



# City of Casa Grande

INTERVENTION

CHRIS WATSON

RECEIVED

2008 JAN 11 P 12:44

AZ CORP COMMISSION  
DOCKET CONTROL

January 11, 2008

Arizona Corporation Commission  
Docket Control  
1200 W. Washington Street  
Phoenix, Arizona 85007

RE: MOTION TO INTERVENE in the Application to Alter Crossings in Pinal County  
by the Union Pacific Railroad.

DOCKET No. RR-03639A-07-0519

City Attorney's name and address are listed below.

The City of Casa Grande wishes to intervene in the application to Alter Crossings in Pinal County by the Union Pacific Railroad ("UPRR"). The crossings at Trekell, Cox, and Sunland Gin Roads that UPRR is proposing to alter are within the City of Casa Grande's city limits. Furthermore, the crossings at Keeling and Peart Roads, while not currently within the city limits, are within the City's planning boundary. The alteration of these railroad crossings will directly affect the citizens of the City of Casa Grande. Due to the obvious and substantial impacts on transportation within the City's current and future limits, the City has an interest in how these crossings will be altered and requests that it be allowed to intervene in this application.

I hereby certify that a copy of this Notice of Intervention has been mailed to Anthony J. Hancock, Esq., BEAUGUREAU, ZUKOWSKI & HANCOCK, P.C., 302 E. Coronado, Phoenix, Arizona 85004.

Sincerely,

Brett D. Wallace  
City Of Casa Grande City Attorney  
510 E. Florence Blvd.  
Casa Grande, Arizona 85222  
520-421-8600

BEFORE THE ARIZONA CORPORATION COMMISSION

RECEIVED

2008 JUN -2 P 4: 35

AZ CORP COMMISSION  
DOCKET CONTROL

COMMISSIONERS

MIKE GLEASON, Chairman  
WILLIAM A. MUNDELL  
JEFF HATCH-MILLER  
KRISTIN K. MAYES  
GARY PIERCE

IN THE MATTER OF THE  
APPLICATION OF UNION  
PACIFIC RAILROAD TO ALTER  
FIVE CROSSINGS OF THE UNION  
PACIFIC RAILROAD AT TREKELL,  
KEELING, PEART, COX AND  
SUNLAND GIN ROADS

) DOCKET NO. RR-03639A-07-0519  
)  
)  
) NOTICE OF FILING FULLY  
) EXECUTED AGREEMENT FOR  
) CONSTRUCTION AND FUNDING  
) OF GRADE SEPARATIONS IN  
) PINAL COUNTY

Union Pacific Railroad Company ("Union Pacific") hereby gives notice that Pinal County, the City of Maricopa, the City of Casa Grande, the City of Eloy, and Union Pacific have all signed the attached Agreement for Construction and Funding of Grade Separations ("Agreement"). Union Pacific is filing a copy of the fully executed Agreement in all dockets in which Union Pacific has sought the Commission's authority to add a second mainline track to the crossings shown on Exhibit A to the Agreement attached hereto.

RESPECTFULLY SUBMITTED this 2<sup>nd</sup> day of June, 2008.

BEAUGUREAU, HANCOCK,  
STOLL & SCHWARTZ, P.C.

By: Terrance L. Sims  
Anthony J. Hancock  
Terrance L. Sims  
302 East Coronado Road  
Phoenix, Arizona 85004  
Attorneys for Applicant Union  
Pacific Railroad Company

1 ORIGINAL AND THIRTEEN COPIES  
2 of the foregoing filed this 2nd day of  
3 June, 2008, with:

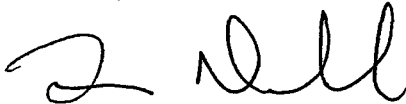
4 Arizona Corporation Commission  
5 1200 West Washington Street  
6 Phoenix, Arizona 85007

7 COPY of the foregoing hand-delivered  
8 this 2<sup>nd</sup> day of June, 2008, to:

9 Charles H. Hains, Esq.  
10 Legal Division  
11 Arizona Corporation Commission  
12 1200 West Washington Street  
13 Phoenix, Arizona 85007  
14 Attorney for the Commission's  
15 Railroad Safety Section's Staff

16 COPY of the foregoing mailed this  
17 2<sup>nd</sup> day of June, 2008, to:

18 Mr. David Raber  
19 Mr. Brian Lehman  
20 Mr. Chris Watson  
21 Railroad Safety Section  
22 Arizona Corporation Commission  
23 2200 North Central Avenue, #300  
24 Phoenix, Arizona 85004

25 

26 Dan Norkol

**AGREEMENT FOR CONSTRUCTION  
AND FUNDING OF  
GRADE SEPARATIONS**

**Between**

**PINAL COUNTY, CITY OF MARICOPA,  
CITY OF CASA GRANDE, CITY OF ELOY  
And  
UNION PACIFIC RAILROAD COMPANY**

---

This **AGREEMENT FOR CONSTRUCTION AND FUNDING OF GRADE SEPARATIONS** ("Agreement") is entered into this 27<sup>th</sup> day of May, 2008, between **PINAL COUNTY, ARIZONA, and the CITY OF MARICOPA, CITY OF CASA GRANDE, and CITY OF ELOY**, all of which are governmental agencies of the State of Arizona (hereinafter referred to jointly as "Agencies" and individually by name where appropriate) and the **UNION PACIFIC RAILROAD COMPANY**, a Delaware corporation operating a railroad in the State of Arizona (hereinafter referred to as "UPRR").

**RECITALS**

A. UPRR currently is constructing a second main track on and along the Gila Subdivision (Yuma – Tucson) main line in Arizona wherever there is currently only a single main line track. UPRR's project requires construction of a second main track through and across existing public grade crossings within the municipal limits of Agencies. A list of existing public grade crossings of UPRR's Gila Subdivision main line located within the jurisdiction of one or more than one of the Agencies is attached hereto as Exhibit A and incorporated herein by reference. The listing of crossings on Exhibit A excludes Maricopa Road (SR 347) in the City of Maricopa because that highway is under the jurisdiction of the Arizona Department of Transportation and is not covered by this Agreement.

B. UPRR and Agencies have met on several occasions to discuss UPRR's double track construction project. UPRR has presented maps and other information to Agencies. UPRR has identified each public crossing involved in the double track project as listed on Exhibit A. Agencies and each of them understand the scope of the project as it may affect roadway grade crossing within their respective jurisdictions. Agencies have expressed concern about grade separations that may be required in the future at one or more of the grade crossings listed on Exhibit A.

C. UPRR wishes to obtain Agencies' support and cooperation with respect to construction of the double track project across the grade crossings listed on Exhibit A. Agencies wish to have UPRR address Agencies' concerns about future grade separations. UPRR and Agencies desire to enter into this binding Agreement to address grade separations and to secure Agencies' cooperation with respect to the construction of the double track project across the grade crossings listed on Exhibit A.

NOW, THEREFORE, the parties hereto make and enter into the following binding agreement:

### AGREEMENT

1. Grade Separations. (a) Subject to the terms of this Agreement, UPRR agrees to contribute a share of the construction costs of the next four grade separations to be constructed over or under the Gila Subdivision main line in Pinal County by Agencies or any of them ("Four Grade Separations", or individually, "Grade Separation"). The identity of the Four Grade Separations and the amount to be contributed by UPRR for each Grade Separation shall be determined by Agencies in accordance with the terms of this Agreement but otherwise in their sole discretion. Agencies, with the leadership and guidance of Pinal County and within a reasonable time period after the effective date of this Agreement, shall adopt reasonable and equitable procedures for such determinations and shall provide copies of said procedures to UPRR.

(b) Agencies hereby covenant to close at least one public grade crossing with active warning devices listed on Exhibit A for each Grade Separation to be constructed in order for the Grade Separation to qualify for UPRR contribution. This may be the grade crossing replaced by the Grade Separation or it may be a grade crossing at another location on the Gila Subdivision in Pinal County as Agencies shall designate. The application for closing a grade crossing must be included in the Agency application to the Arizona Corporation Commission ("ACC") for the Grade Separation. If the ACC denies the grade crossing closure, then the Grade Separation will not qualify for UPRR contribution.

2. UPRR Contribution. (a) Notwithstanding anything to the contrary in this Agreement, UPRR's total aggregate contribution toward construction of the Four Grade Separations is capped at \$35 million ("Maximum Contribution"). Agencies shall determine, in accordance with the procedures adopted pursuant to Section 1(a), the portion of the Maximum Contribution that will be allocated to each qualifying Grade Separation.

(b) UPRR agrees to pay the Maximum Contribution in the following manner:

- \$3 million thereof shall be paid to Agencies (in the manner that Agencies shall designate in writing) within one year following the date of execution of this

Agreement by all parties. This amount is to be used by Agencies only for preliminary engineering and administrative expenses for the proposed Grade Separation projects.

- one-half of the remaining \$32 million shall be paid to Agencies within thirty days after notification from Agencies that the first construction contract has been awarded for a qualifying Grade Separation.
- the balance of the Maximum Contribution shall be paid to Agencies within thirty days after notification from Agencies that the construction contract has been awarded for the second qualifying Grade Separation.

Agencies shall safeguard and handle all amounts paid by UPRR to Agencies in accordance with applicable state regulations and shall employ effective practices to insure that all funding paid out for the qualifying Grade Separations is paid only for actual work and materials in a reasonable manner.

3. Agency Commitments. Agencies and each of them make the following binding and enforceable commitments, in accordance with the terms and conditions of this Agreement, to UPRR with respect to the grade separation projects:

(a) Agencies will identify in writing one of the Four Grade Separations as promptly as possible, and thereafter keep UPRR informed in writing as to the identity and order of construction of all Four Grade Separations as such determinations are made by Agencies.

(b) One or more of the Agencies will begin construction of the first qualifying Grade Separation within ten years from the date of this Agreement. "Begin construction" means that a project has gone out for bid and a construction contract has been awarded.

(c) One or more of the Agencies will begin construction of all of Four Grade Separations that qualify within twenty-five years from the date of this Agreement. However, if commencement of construction of the fourth of Four Grade Separations that qualify is not reasonably possible within such twenty-five year period and four of the at-grade crossings listed on Exhibit A have been closed by Agencies, then Agencies' obligation to begin construction within such twenty-five year period will be limited to three of Four Grade Separations that qualify. Such limitation of Agencies' construction obligation to three of Four Grade Separations will not affect UPRR's contribution obligations with respect to the Four Grade Separations and UPRR shall not be entitled to any refund under subparagraph (d) below for failure to construct the Fourth of the Four Grade Separations unless there is no reasonable possibility of a Fourth Grade-Separated Crossing begin constructed within a reasonable period of time after the twenty-five year period.

(d) UPRR and Agencies will meet and determine how to apply any funds remaining from the Maximum Contribution if all of Four Grade Separations that qualify are not underway within twenty-five years from the date of this Agreement. The goal in all cases is to apply the Maximum Contribution to the Four Grade Separations, but if there is no reasonable possibility of construction of all of Four Grade Separations that qualify being commenced within a reasonable period of time after the end of the twenty-five years, Agencies shall refund to UPRR any monies remaining (except for monies Agencies have previously expended toward construction of a Grade-Separated Crossing or are contractually obligated to pay third parties for cancellation of contracts related to a Grade-Separated Crossing) from amounts contributed by UPRR under this Agreement, and UPRR will have no further obligation to contribute toward the Four Grade Separations.

(e) UPRR's Maximum Contribution as provided for in this Agreement shall constitute the only contribution UPRR will be required to make toward the Four Grade Separations, notwithstanding any federal, state or local contributions or funding sources that may be applied by Agencies toward any of the Four Grade Separations. Agencies and each of them promise not to seek any additional contribution from UPRR for any of the Four Grade Separations nor shall UPRR be obligated to pay any additional share or contribution.

#### 4. UPRR Double Track Project Cooperation.

(a) Provided that this Agreement is in full force and effect, Agencies and each of them agree to support UPRR's double track project and in specific to support and approve construction of the additional main track over and across each grade crossing listed on Exhibit A. Agencies jointly and severally agree to provide one or more letters to or filings with the Arizona Corporation Commission ("ACC") advising the Commission that Agencies and each of them support and approve of UPRR's project applications for construction of one or more additional tracks across all public grade crossings within the jurisdiction of Agencies. If appropriate, Agencies will endeavor to appear at ACC hearings and public meetings to advise the ACC that they support and approve UPRR's applications to the ACC for authority to alter the subject grade crossings by installing a second main line track at grade.

(b) UPRR shall file this Agreement (when effective) with the ACC in support of each application it files for an additional main track over and across a public grade crossing listed on Exhibit A. Agencies and each of them agree to provide statements confirming the effectiveness of this Agreement if so requested by the ACC or UPRR

5. Grade Separation and Other Projects. (a) Provided that this Agreement is in full force and effect, UPRR agrees to support and approve construction of each Agency grade separation project covered herein, subject to execution by Agency of UPRR's typical construction and maintenance agreement (which shall be consistent

with the terms of this Agreement, and subject to Agencies obtaining necessary property rights and right of entry from UPRR as is customary for any project on railroad right of way, including UPRR's standard practices for determining compensation. UPRR further commits that it will expedite review of all Agency plans to modify crossings and to build grade separation projects, such review to be in accordance with UPRR's standard public projects guide.

(b) UPRR and Agencies agree to maintain open lines of communication about transportation and growth projects where their respective interests overlap, except that confidential or proprietary information will not be included in such communications. UPRR acknowledges the interest expressed by Agencies to further economic development in the region by developing additional rail spurs for movement of freight. UPRR will cooperate with Agencies in processes established to streamline the addition of rail spurs when approached by economic development prospects needing additional rail service.

(c) UPRR will participate in discussions with Agencies and other Arizona governmental entities concerning the feasibility of passenger and commuter train operations. UPRR will work with Agencies to encourage ADOT and other Arizona governmental entities to include Agencies in such discussions.

(d) Agencies agree to expedite governmental review and approval of all UPRR permit applications.

(e) UPRR agrees to cooperate with the City of Maricopa's proposal to relocate the Amtrak station to a new site with a multi-modal, park-and-ride facility.

(f) UPRR will provide a preliminary construction schedule to Agencies for the double track work at crossings. UPRR will update this schedule as necessary.

(g) UPRR agrees to donate the former railroad depot at Casa Grande to the City of Casa Grande without charge upon request to do so. City and UPRR shall negotiate in good faith for the removal of the depot from the railroad right of way by City within a reasonable time. From and after donation to the City, the City shall fence off the depot as reasonably requested by UPRR and shall be solely responsible for all further maintenance and upkeep of the depot and fencing.

(h) UPRR agrees to reimburse the Maricopa Domestic Water District for the reasonable documented out-of-pocket costs of extending (i) the thirty-inch steel casing of the twelve-inch pressurized water pipeline located at UPRR Milepost 897.80 at SR 347, and (ii) the eighteen-inch steel casing of the eight-inch pressurized water pipeline located at UPRR Milepost 897.47, UPRR Station 22700+00.

(i) UPRR agrees to reimburse the City of Casa Grande's, its wholly owned utility company, or any successor thereto, for the reasonable documented out-of-

pocket costs of extending the sixteen-inch steel casing of the nine-inch pressurized water pipeline located at UPRR Milepost 906.35 near Anderson Road.

(j) In addition to installing the grade crossing improvements in the City of Eloy shown on the plans provided by UPRR to the City, UPRR agrees to contribute Fifty Thousand Dollars (\$50,000) to the City of Eloy for City's use in modifying, as and when City deems it necessary, the street intersections in the vicinity of the grade crossings being altered for UPRR's double tracking project. UPRR will make such contribution within ten (10) days after this Agreement is signed by all parties.

(k) UPRR and Agencies agree to meet to discuss public safety issues associated with trespassing on the UPRR right-of-way and means of addressing such safety issues.

#### 6. Effectiveness and Termination of Agreement.

(a) This Agreement shall be effective when signed by all parties hereto. The date of this Agreement shall be the date on which the last party signs it.

(b) UPRR may unilaterally terminate this Agreement without penalty or obligation to Agencies if (i) the ACC (A) rejects or disapproves, or attaches substantial adverse conditions to, any UPRR double track project grade crossing alteration applications regarding public grade crossings within Agencies' jurisdiction as listed on Exhibit A, or (B) orders a grade separation at any public grade crossing within Agencies' jurisdiction as listed on Exhibit A in response to a UPRR application to construct an additional main track at grade over and across such crossing, unless such order contains terms which are substantially the same in form and substance as the terms of this Agreement, or (ii) if Agencies fail to comply with their obligation under Section 3(b) to begin construction of the first qualifying Grade Separation within ten years from the date of this Agreement. UPRR's right to terminate this Agreement upon adverse action by the ACC as set forth above shall be effective regardless of whether or not Agencies and each of them have supported UPRR's double track crossing applications. Upon termination of this Agreement, Agencies shall refund to UPRR any monies remaining from amounts contributed by UPRR under this Agreement, except for monies Agencies are contractually obligated to pay third parties for cancellation of contracts for the preliminary engineering work referred to under Section 2 above.

#### 7. Miscellaneous Provisions.

(a) This Agreement constitutes the entire agreement between UP and Agencies relating to this transaction. All prior or contemporaneous agreements, understandings, representations or statements, whether oral or written, relating to this transaction are merged herein. The headings and titles to provisions in this Agreement are for convenience only, and shall not be deemed to modify or affect the rights or duties of UP or Agencies. All rights and obligations of UP and Agencies set forth in this

Agreement are integral parts of this Agreement. The consideration inducing UP and Agencies to enter into this Agreement includes all of the commitments by UP to Agencies, and by Agencies to UP, as set forth in this Agreement. The terms of this Agreement have been arrived at after considerable arms length negotiation and mutual review of the parties, and the parties agree that none of the provisions herein shall be deemed or presumed to be construed against either party, regardless of which party drafted all or part of the terms of this Agreement.

(b) Except as specifically set forth in this Agreement, none of the parties hereto waives, releases or relinquishes any rights any such party may have with respect to construction of railroad trackage or facilities or with respect to grade separation or grade crossing projects in the State of Arizona.

(c) No modifications to this Agreement shall be effective unless in writing signed by all parties hereto.

(d) This Agreement shall be governed by Arizona law.

(e) Time is of the essence of this Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the dates set forth below.

PINAL COUNTY, ARIZONA

UNION PACIFIC RAILROAD COMPANY

By: David Sunde  
Title: Chairman

By: DG Duffy  
Title: VP

Attest:  
Sheri Cruz  
Date: 5/21/08

Attest:  
C. W. Saylor  
Date: 5/27/08

CITY OF CASA GRANDE, ARIZONA

CITY OF ELOY, ARIZONA

By: Valent Gue  
Title: Mayor

By: [Signature]  
Title: Mayor

Attest:  
Jennifer S. Miller  
Date: 5/19/08

Attest:  
Mary Myers  
Date: 5/21/08

CITY OF MARICOPA, ARIZONA

By: [Signature]  
Title: MAYOR

Attest:  
Vincent Brown  
Date: 05/20/08

# EXHIBIT A

STATE	SUBDIVISION	MILE POST	CITY	COUNTY	ROAD AUTHORITY	STREET NAME	DOT NO.	CROSSING CLASSIFICATION (PUB, PVT, PED)
AZ	GILA	891.34	MARICOPA	PINAL	Pinal Co.	RIO BRAVO RD	741341N	Public
AZ	GILA	893.38	MARICOPA	PINAL	Pinal Co.	RALSTON RD	741342V	Public
AZ	GILA	900.25	MARICOPA	PINAL	City Maricopa	PORTER. RD	741345R	Public
AZ	GILA	901.50	CASA GRANDE	PINAL	City Maricopa	WHITE PARK RD	741346X	Public
AZ	GILA	903.91	CASA GRANDE	PINAL	City Maricopa	HARTMAN ROAD	741347E	Public
AZ	GILA	906.35	CASA GRANDE	PINAL	Pinal Co.	ANDERSON RD	741351U	Public
AZ	GILA	911.26	CASA GRANDE	PINAL	Casa Grande	MONTGOMERY ROAD	741353H	Public
AZ	GILA	915.01	CASA GRANDE	PINAL	Pinal Co.	ETHINGTON ROAD	741357K	Public
AZ	GILA	917.40	CASA GRANDE	PINAL	Casa Grande	THORNTON RD	741358S	Public
AZ	GILA	918.76	CASA GRANDE	PINAL	Casa Grande	SACATON ST	741362G	Public
AZ	GILA	918.86	CASA GRANDE	PINAL	Casa Grande	FLORENCE ST	741363N	Public
AZ	GILA	919.18	CASA GRANDE	PINAL	Casa Grande	HERMOSILLO ST	741364V	Public
AZ	GILA	919.90	CASA GRANDE	PINAL	Casa Grande	TREKELL RD	741367R	Public
AZ	GILA	920.70	CASA GRANDE	PINAL	Pinal Co.	KEELING ROAD	741368X	Public
AZ	GILA	921.17	CASA GRANDE	PINAL	Pinal Co.	PEART RD	741371F	Public
AZ	GILA	923.69	CASA GRANDE	PINAL	Casa Grande	COX ROAD	741372M	Public
AZ	GILA	924.92	CASA GRANDE	PINAL	Casa Grande	SUNLAND GIN RD	741374B	Public
AZ	GILA	928.64	ELOY	PINAL	Eloy	TOLTEC ROAD	741375H	Public
AZ	GILA	930.28	ELOY	PINAL	Eloy	HOUSER ROAD	741376P	Public
AZ	GILA	931.95	ELOY	PINAL	Eloy	BATTAGLIA RD	741377W	Public
AZ	GILA	932.40	ELOY	PINAL	Eloy	ELEVEN MILE RD	741707A	Public
AZ	GILA	933.31	ELOY	PINAL	Eloy	MAIN ST	741708G	Public
AZ	GILA	933.62	ELOY	PINAL	Eloy	SUNSHINE BLVD	741709N	Public
AZ	GILA	934.88	PICACHO	PINAL	Eloy	LA PALMA RD	741710H	Public
AZ	GILA	938.52	PICACHO	PINAL	Pinal Co.	PICACHO SCHOOL RD	741712W	Public
AZ	GILA	950.22	RED ROCK	PINAL	Pinal Co.	PARK LINK DRIVE	741714K	Public
AZ	GILA	956.26	RED ROCK	PINAL	Pinal Co.	MISSILE BASE ROAD	741716Y	Public